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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,845	08/26/2005	Martin Vorbach	2885/86	9148

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EXAMINER

VICARY, KEITH E

ART UNIT	PAPER NUMBER
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2196

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/20/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/501,845

Applicant(s)

VORBACH ET AL.

Examiner

Keith Vicary

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/16/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-13 are pending in this examination. Claims 7-13 are new and claims 1-6 are cancelled by an amendment filed 7/16/2004. Claims 7-13 are presented for examination.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claim 13 is objected to because of lack of antecedent basis. Appropriate correction is required.

a. "the at least one measuring unit," claim 13, line 2.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonion (WO 99/40522) in view of Panwar et al. (US PAT 5941977).

Consider claim 7, Gonion discloses a reconfigurable field of data processing cells (page 5, lines 1-6 and page 15, lines 5-7); and a data stream memory designed to store at least one of a data stream and parts of the data stream (page 5, lines 7-11 and page 16, lines 1-8).

However, Gonion does not explicitly disclose that said data stream memory is in the form of a register.

On the other hand, Panwar does disclose a register (col. 2, lines 26-29 and col. 7, line 31).

A register's purpose is to store data and thus fits into the environment of Gonion in acting as the data stream memory. One of many motivations of having a register act as the data stream memory would be to allow quick access to the data because a register is typically closer to a processor than other forms of memory lower in the memory hierarchy.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gonion with the register of Panwar in order to allow quicker access to the data stream.

Consider claim 8, the claim is rejected for the same reasons as claim 7 above. In addition, Panwar discloses at least one: i) of a register allocation device to allocate the register, and ii) a register releasing device to release the register (col. 7, lines 31-39 and 54-64).

Consider claim 9, the claim is rejected for the same reasons as claim 7 above. In addition, Panwar discloses that the register allocation device is configured to be preserved over multiple reconfigurations of the reconfigurable field of data processing cells (col. 2, lines 25-42, col. 6, lines 32-36, col. 7, lines 31-39 and 54-64; the multithreading aspect in which each thread has its corresponding registers conserved correlates to the different reconfigurations).

Consider claim 10, Gonion discloses that the register is a RAM PAE (page 43, lines 10-13 and page 50, lines 11-17).

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gonion and Panwar as applied to claim 7 above, and further in view of Dockser (US PAT 5860119).

Consider claim 11, Gonion discloses a FIFO (page 50, lines 11-17), and Panwar discloses a register (col. 2, lines 26-29 and col. 7, line 31). However, both Gonion and Panwar do not explicitly disclose a second register configured to provide read and write access when a virtual FIFO dividing line is implemented.

On the other hand, Dockser does disclose a second register configured to provide read and write access (col. 4, lines 32-35 and col. 5, lines 56-65) when a virtual FIFO dividing line is implemented (col. 3, lines 10-30, lines 54-56; the last

word flag and end-of-packet detection means correlate to the said virtual FIFO dividing line).

Using the invention of Dockser in general makes a FIFO system both simple and inexpensive to implement (col. 4, lines 6-40), despite decreases in management overhead. Moreover, the modifications to a FIFO shown by Dockser would easily be applicable to the FIFOs already contained in Gonion and Panwar.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gonion and Panwar with the FIFO modifications taught by Dockser in order to implement the FIFO simply and inexpensively while simultaneously minimizing management overhead.

7. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonion and Panwar as applied to claim 7 above, and further in view of Davis et al. (Davis) (US PAT 4041462).

Consider claim 12, Gonion and Panwar do not explicitly disclose at least one memory unit configured for use as a stack and being configured to indicate at least one of a stack underflow state and a stack overflow state.

On the other hand, Davis does disclose at least one memory unit configured for use as a stack and being configured to indicate at least one of a stack underflow state and a stack overflow state (col. 14, lines 1-4 and lines 21-32)

Stacks in general are an easily implemented method of dynamic allocation of storage space for data, and a simple efficient mechanism for enqueueing data and/or parameters. Furthermore, the stacks of Davis would fit into the computing environment of Gonion and Panwar as stacks are prevalent throughout computing today for a wide range of uses.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Gonion and Panwar with the stacks of Davis in order to easily implement a method of dynamic allocation of storage space for data, and efficiently enqueue data and/or parameters.

Consider claim 13, the claim is rejected for the same reasons as claim 12 above. In addition, Davis discloses the at least one measuring unit is configured to indicate the at least one of the underflow state and overflow state of an operating system unit (col. 14, lines 1-4 and lines 21-32; also, note the PSW is typically accessed by the operating system).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Vicary whose telephone number is (571) 270-1314. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil El-Hady can be reached on 571-272-3963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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NABIL M. EL-HADY
SUPERVISORY PATENT EXAMINER